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TOWNSEND AND TOWNSEND AND CREW, LLP
TWO EMBARCADERO CENTER
EIGHTH FLOOR
SAN FRANCISCO, CA 94111-3834

EXAMINER

HARPER, LEON JONATHAN

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/817,161	Applicant(s) WEISSMAN ET AL.	
	Examiner Leon J. Harper	Art Unit 2166	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>1/12/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. The amendment filed 4/26/2007 has been entered. Claims 1, 3 and 4 have been amended. No claims have been canceled and new claims 24-26 have been added. Accordingly, claims 1-26 are pending in this office action.

Response to Arguments

Applicant's arguments with respect to claims 1-26 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 20,22,24-26 are rejected under 35 U.S.C. 102(e) as being anticipated by US 20050071345 (hereinafter Lin)

As for claim 1 Lin discloses: data structure having a plurality of data columns and one or more index columns; defining a first data field for a first tenant, said first field having a first data type (See paragraph 0028); defining a second data field for a second tenant, said second field having a second data type, wherein the second data type may be different than said first data type and (See paragraph 0028); when records having data values in the first and second fields are created by the first and second tenants, storing the data values of first and second fields to a single column in the data structure, wherein the single column includes data values that may include different data types for different tenants (See paragraph 0031)

As for claim 2, the rejection of claim 1 is incorporated and further Lin discloses: defining a separate data structure having one or more columns; and in response to an indication from one of the first tenant and the second tenant that data in the first data field or second data field, respectively, be unique, copying the data values stored in the single data column corresponding to the first data field or second data field, respectively, to a column in the separate data structure (See paragraph 0037).

As for claim 3, the rejection of claim 1 is incorporated and further Lin discloses: copying to a first one of the index columns the data values stored in the single data column for the first field in response to a request from the first tenant to index data in the first data field (See paragraph 0040)

As for claim 4, the rejection of claim 3 is incorporated, and further Lin discloses: wherein copying includes converting the copied data values to a modified format (See paragraph 0071)

Claims 20,22 comprise substantially the same limitations as claim 1, and is thus rejected for the same reasons as set forth in the rejection of claim 1.

As for claim 24 the rejection of claim 1 is incorporated and further wherein the multi-tenant data structure comprises a relational database data structure (See paragraph 0005).

As for claim 25 the rejection of claim 4 is incorporated and further Lin discloses: wherein the converting includes applying a case folding algorithm to the data values (See paragraph 0071).

As for claim 26 the rejection of claim 4 is incorporated and further Lin discloses wherein the modified format comprises a common data type corresponding to the index column (See paragraph 0071).

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Claims 5-19,21,23, are rejected under 35 U.S.C. 102(e) as being anticipated by US 20030154197 (hereinafter Mill).

As for claim 5 Mill discloses: 5. defining a multi-tenant data structure having a primary key column (See paragraph 0042), an organization id column and a plurality of data columns; defining a first table for a first tenant, said first table having a first data field, and said first tenant having a first tenant id; assigning a first table id to the first table (See paragraph 0054); defining a second table for a second tenant, said second table having a second data field, and said second tenant having a second tenant id; assigning a second table id to the second table; wherein when records are created for the first table by the first tenant, for each created record (See paragraph 0054): a) storing the value of the first data field to a single data column in the data structure; b) storing the first tenant id in the organization id column; and c) storing the first table id to the primary key column; and wherein when records are created for the second table by the second tenant, for each created record: (See paragraph 0055) a) storing the value of the second data field to said single data column in the data structure; b) storing the second tenant id in the organization id column; and c) storing the second table id to the primary key column; and wherein the first and second tables of the first and second tenants are stored in the data structure (See paragraph 0055).

As for claim 6, the rejection of claim 5 is incorporated, and further Mill discloses: copying to a first one of the index columns the data values stored in the single data

column for the first table in response to a request from the first tenant to index data in the first data field (See paragraph 0055).

As for claim 7, the rejection of claim 6 is incorporated, and further Mill discloses: wherein copying includes identifying the data values to be copied based on the first tenant id, the first table id and the first data field (See paragraph 0056).

As for claim 8, the rejection of claim 5 is incorporated, and further Mill discloses: wherein said first data field has a first data type, and wherein said second data field has a second data type different from the first data type, such that said single data column includes data values having said first and second data types (See paragraph 0071).

Claim 9 comprises substantially the same limitations as claim 5 and is thus rejected for the same reasons as set forth in the rejection of claim 5.

As for claim 10, the rejection of claim 9 is incorporated, and further Mill discloses: defining a third table for a second tenant, said third table having a third data field, said third data field having a third data type, and said second tenant having a second tenant id; and assigning a third table id to the third table; wherein when records are created for the third table, for each created record: storing the value of the third data field to said single data column in the data structure; storing the second tenant id in the organization

id column; and storing the third table id to the primary key column; wherein the first, second and third tables are stored in the data structure, and wherein said single data column includes data values having said first and second data types and said third data type (See paragraph 0071).

As for claim 11, the rejection of claim 9 is incorporated, and further Mill discloses: wherein the first and second table ids are different (See paragraph 0055).

As for claim 12, the rejection of claim 10 is incorporated, and further Mill discloses: wherein the first and second table ids are different, and wherein the third table id is the same as one of the first and second table ids (See paragraph 0055).

As for claim 13, the rejection of claim 9 is incorporated, and further Mill discloses: wherein the data structure includes one or more index columns, the method further comprising: copying to a first one of the index columns the data values stored in the single data column for the first table in response to a request from the first tenant to index data in the first data field (See paragraph 0071).

As for claim 14, the rejection of claim 13 is incorporated, and further Mill discloses: wherein copying includes converting the copied data values to a modified format (See paragraph 0070).

As for claim 15, the rejection of claim 14 is incorporated, and further Mill discloses: wherein converting includes applying a case folding algorithm to the data values (See paragraph 0071).

As for claim 16, the rejection of claim 9 is incorporated, and further Mill discloses: wherein said third data type is selected from the group consisting of said first data type, said second data type and a data type different from the first and second data types (See paragraph .

As for claim 17, the rejection of claim 9 is incorporated, and further Mill discloses: wherein when the first tenant creates a record for the first table, executing a process that determines whether the data value in the first data field for that record satisfies a threshold criteria, and if so, processing an action rule (See paragraph 0068).

As for claim 18, the rejection of claim 17 is incorporated, and further Mill discloses: wherein the action rule indicates a recipient of a notification, the method further including automatically sending a notification message to the recipient (See paragraph 0067).

As for claim 19, the rejection of claim 9 is incorporated, and further Mill discloses: defining an owner field for the first data table, wherein each data value stored in the

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owner field indicates an hierarchical user access level for the associated record (See paragraph 0056).

Claims 21,23 contains substantially the same limitations as claim 5 and is thus rejected for the same reasons as claim 5.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leon J. Harper whose telephone number is 571-272-0759. The examiner can normally be reached on 7:30AM - 4:00Pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain T. Alam can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LJH
Leon J. Harper
July 2, 2007


HOSAIN ALAM
SUPERVISORY PATENT EXAMINER